IN THE CLAIMS:

Please substitute claims 1-20 as originally filed, which appear on pages 13-19, with claims 1-19 as filed in the Article 34 amendment of November 27, 2001 and December 18, 2001. The pages containing claims 1-19 are marked "AMENDED SHEET" and are attached hereto. Following the insertion of claims 1-19, please amend the claims as follows:

Please amend the claims as follows:

3. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission [wherein such is utilised] according to claim 1, whereby an actual torque to be transmitted by the transmission (Tp) varies within a torque range (Tp,min; Tp,max) of possible values, **characterised in that** in a predominant part of said torque range (Tp,min; Tp,max) said torque signal (Tt) represents the actual torque to be transmitted (Tp) multiplied by a safety factor substantially equal to 1.3.

4. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission [wherein such is utilised] according to claim 1, **characterised in that** the relationship between the rate of change, RC, of the ratio of the rotational speed of said pulleys

(4, 5) and said clamping of the belt (1) between the pulley discs (8, 9, 10 and 11) is given by the equation:

$$\mathbf{RC} = -\mathbf{M}_{\mathrm{Nf/Ns}} \bullet \mathbf{Ns} \bullet \mathbf{Ff} \bullet \left(\mathbf{KsKf} - \frac{\mathbf{Fs}}{\mathbf{Ff}} \right)$$

wherein:

- $M_{Nf/Ns}$ is an experimentally determined (positive) parameter which varies with the ratio of the rotational speeds of said pulleys (4, 5),
- Ff is the force with which the drive belt (1) is clamped between the discs (8, 9) of the first pulley (4),
- Fs is the force with which the drive belt (1) is clamped between the discs (10, 11) of the second pulley (5),
- KsKf is the ratio of said forces Fs and Ff at which said rate of change would be zero.

a'

5. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission wherein such is utilised, according to claim 1, the control system (15, 16, 17, 18, 19, 20, 21) comprising an electronic control unit (17, 18, 19) with a first control module (17) generating a first control current (If) for operating said first valve (15), a second control module (18) generating a second control current (Is) for operating the second valve (18) and a hydraulic circuit (15, 16, 20, 21) for allowing hydraulic medium to and from said first and said second piston/cylinder

assembly (12, 13), said circuit at least being provided with a first valve (15), a second valve (16), a pump (20) and a reservoir for hydraulic medium (21), **characterised in that,**

- said modules (17, 18) are capable of mutually providing each other with at least one signal (Sf, Ss),

- in that a control module (17 or 18) incorporates a mathematical representation of a mass balance of the hydraulic circuit (15, 16, 20, 21)

a1

- and in that said control module (17 or 18) is capable of outputting a response signal representing a control current (If or Is) required for effecting a desired pressure response of the hydraulic circuit (15, 16, 20, 21) based on said mathematical representation.

a2

7. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission wherein such is utilised according to claim 5, the pump (20) circulating a variable flow (Qop) of hydraulic medium through the hydraulic circuit (15, 16, 20, 21), **characterised in that**, said mathematical representation takes into account at least said flow (Qop) generated by the pump (Qop), the amount of flow (Qsq, Qp. through the valves (Qsa, Qsp+Qpa) and the amount of flow to and/or from the piston/cylinder assemblies (Qfp and/or Qsp).

a3

9. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission wherein such is utilised according to claim 5,

wherein the first valve (15) determines the cylinder pressure (Pf) in the first piston/cylinder assembly (12) and wherein the second valve (16) determines a cylinder pressure (Ps) in the second piston cylinder assembly (13), **characterised in that,** the first valve (15) is a pressure control valve (15), which controls the maximum pressure in the hydraulic circuit by controlling a flow (Qsa) from the pump (20) to a reservoir (21) for hydraulic medium and in that the second valve (16) is a flow control valve (16), which controls flow (Qsp) from the pump (20) to the second piston/cylinder assembly (13) and the flow (Qpa) from the second piston/cylinder assembly (13) to said reservoir (21).

a3

12. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission wherein such is utilised according to claim 9, **characterised in that,** the first control module (17) is capable of controlling said clamping of the drive belt (1) by generating a control current (If) for controlling the first ~~vale~~ valve (15) so that the cylinder pressure (Pf) in the piston/cylinder assembly (12) of the first pulley (4) is equal to the highest value of either:

a4

- a minimum pressure (Pf,min) at which torque transmission between the first pulley (4) and the drive belt (1) occurs virtually without mutual movement, or
- a minimum pressure required for the cylinder pressure (Ps) in the piston/cylinder assembly (13) of the second variable pulley

(5) to become equal to a minimum cylinder pressure (Ps,min) at which torque transmission between the second pulley (5) and the drive belt (1) occurs virtually without mutual movement, or

- a minimum pressure (Pff,min) at which the ratio of the rotational speed of the first and the second pulley (4, 5) decreases at a desired rate of change, or

- a minimum pressure required for the cylinder pressure (Ps) in the piston/cylinder assembly (13) of the second variable pulley (5) to become equal to a further minimum cylinder pressure (Psf,min) at which the ratio of the rotational speed of the first and the second pulley (4, 5) increases at a desired rate of change.

A4

13. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission wherein such is utilised according to claim 1, **characterised in that**, the control system (15, 16, 17, 18, 19, 20, 21) is provided with change rate restriction means for reducing said desired rate of change of the ratio of the rotational speed of said pulleys (4, 5).

A5

16. (amended) Control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission wherein such is utilised according to claim 1 wherein the cylinder pressure (Pf) in the first piston/cylinder assembly (12) is measured by means of a pressure sensor, **characterised in that**, the control system (15, 16, 17, 18, 19,

20, 21) is provided with calculating means for calculating the cylinder pressure (Ps) in the second piston/cylinder assembly (13) based signals at least representing said cylinder pressure (Pf) in the first piston/cylinder assembly (12), the rotational speed of the first pulley (4) and the rotational speed of the second pulley (5).

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17. (amended) Continuously variable transmission ~~provided~~ with a control system (15, 16, 17, 18, 19, 20, 21) according to claim 1.

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